HAMATEUR CHATTER

The Milwaukee Radio Amateurs Club

October 2013 Volume 21, Issue 10

One of the World's Oldest Continuously Active Radio Amateur Clubs—since 1917

Presidents' Letter

We received some sad news a couple of weeks ago. Tom N9UFJ informed the board that Jackie had lost her battle with cancer. She passed away on August 22nd after being admitted a month earlier for liquid retention. The last radio function Jackie attended was the South Milwaukee Swapfest. I know I enjoyed our conversation that day at the fest. Jackie was always a cheerful and happy person. I know I will miss seeing her at meetings and other events. Tom our thoughts are with you during this time.

I think most of you know by now that I was interviewed for the Milwaukee Journal/Sentinel. Rick Barrett called the phone number off the our club website. This number was forward to my home and cell phone. He was interested in why our hobby is still around today since people can use Skype. I informed him that there is more than just having a conversation with someone you know.

When you put out a call you never know who may come back you. He liked that I said it was the original social media. Rick seemed very interested in our club when I told him how long we have been around. I gave him one of the club history disks that Dave WB9BWP has made.
There might be another story in it for us once he looks at our history. The article has been picked up by the Nashua NH Telegraph paper. http://www.nashuatelegraph.com/business/1018870-464/ham-radio-its-social-media-old-school.html.

I am sorry I had to miss last month's meeting. From what I was told there was good discussion at the meeting. I think we need to have more of that type of discussion at meetings.

We come to meetings to socialize and to learn something new. I can tell when I stand in the front of the room that to much business isn't good. If you have something you would like to talk about at the meeting please bring it up.

I look forward to seeing you at this months meeting on October 31.

Board of Directors' Meeting

Board of directors meeting called to order at 7:04 pm by Dave Shank, KA9WXN club president.

Director's present: Michael KC9CMT, Dave KA9WXN, Joe, N9UX, Hal, KB9OZN, Al, KC9IJJ.

Absent: Dan, N9ASA. There is one vacancy on the Board of Director's.

The Board of Director's minutes were accepted as published in the July Chatter by a motion forwarded by Michael, KC9CMT seconded by Al, KC9IJJ. The Treasurers report was given by Joe, N9UX. The July balance ended with $19,150.78 in our Club accounts. The club Bank CD was renewed through June 2015. We make about $12 a month in CD interest. We still will be sending the ARRL Spectrum Defense Fund $200 this year.

MRAC Officers:

Terms Expiring in 2014

- President – Dave, KA9WXN
- V-President– Dan, N9ASA
- Secretary – Mike, KC9CMT
- Treasurer – Joe, N9UX
- Director – Vacant

Terms Expiring in 2015

- Director – Al, KC9IJJ
- Director – Hal , KB9OZN

The Club Phone Number is: (414) 332-MRAC or

(414) 332- 6 7 2 2

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Board of Directors' Meeting Minutes

Michael, KC9CMT suggested that we bump this up to $500, but the Board would not approve this figure. We are also sending Pioneer Village $100 as a donation. The Church will be getting a donation of $100 for allowing us to use their facility. The Treasurers report was accepted as reported by a motion made by Hal, KB9OZN, and seconded by Michael, KC9CMT.

Meeting programs: Dave, KA9WXN will not be attending the September meeting due to work commitments. The September meeting will be with Dave, WB9BWP about club history, and a round table discussion on any special contacts made this year, as of the September Board of Director's meeting the subject is still up in the air. Many members have oscilloscopes and do not have the technical training to take measurements with these complicated devices. This subject will be covered in the very near future. The October meeting falls on Halloween this year and will be a program on the club antenna fix that Dave, KA9WXN will give. The November membership meeting will be the 21st due to the thanksgiving holiday. The Board of Directors meeting will be the same week. There will be no meeting held in December due to the holidays. The January 2014 meeting topic is still open. N9GMT may do a presentation on mobile HF radio operation. Jeff Annis, K9BS would be happy to give his an antenna modeling presentation. The February meeting will be a food gathering again in 2014. March or Aprils meeting may be a presentation given by Cheryl (?) on the Ham Nation podcast production. How to use a MFJ-269 antenna analyzer would also be a good topic for the future meeting. May will be the annual club auction. Idea for future meeting; how to get your shack started once you get your ham license.

Field Day: The club would like to buy a rotator for use at field day. Dave, KA9WXN has a contact that is in the rotator rebuilding business that he can call, in an attempt to get a good deal on a unit. Al, KC9IJJ is the feature photo in the CQ August 2014 edition. Pioneer village will be getting a donation from the MARC again this year for the storage of our equipment in their basement. The farmers market will be at Konkel park in Greenfield again in 2014.

Special Project Committees & Committee reports:

Repeater Report: Dave, WB9BWP is the repeater trustee. The club would like more than one repeater trustee. A club repeater trustee has to be a extra class operator to have the kind of privileges that are necessary to operate field day to its fullest extent. We need to ask for volunteers at the membership meeting. Currently the repeater is running on battery power to drain the batteries in preparation for maintenance. Dave, KA9WXN ran the repeater on batteries for three days to condition them.

New Business: There more than likely will be no more AES SuperFest in 2014. A manufacturers day may be what takes place in 2015, with AES doing all the advertising. The club is planning to send another annual donation to the ARRL Spectrum Defense fund. The club will be sending the Spectrum Defense Fund $200 this year. The SuperFest idea is being pushed back to 2015 due to planning issues.

Hamfest Committee: The club is looking at getting two of the Chinese VHF/UHF ham radios to use as door prizes during our Hamfest in February.

Ham radio is on the rise numbers wise, with more retirees and younger people entering the hobby, due to the influx of cheap Chinese Ham Radios for sale. The club really needs PR and recruitment. Having a ARRL convention in Milwaukee, sponsored by the MRAC in conjunction with the clubs 100th anniversary, would be a big event and draw people from all over the Midwest. It would take 5 years plus to organize a national convention. Clubs throughout the country need to use the spectrum that they have been given. Both 440 & 220 are not used very often in the Milwaukee area. D-Star is an emerging part of the amateur radio VHF/UHF spectrum that is gaining in popularity. The club should promote the use of these bands to keep the spectrum alive. We already want promote the 10-10 international radio club.

Special Projects: **The club needs someone to take over the FM simplex contest for February of 2014.** What swapfest will the club be manning tables at in 2014? Definitely, the West Allis ARC swapfest in January. All others are optional. Hal, KB9OZN is discussing the idea of adding of adding different food items to attract members to the club meetings.

A motion was made to adjourn the meeting at 8:05 pm by Dave, KA9WXN seconded by Michael, KC9CMT. Meeting adjourned at 8:10 pm. The room was returned to an organized condition as it was when the room was opened.

Membership Meeting Minutes

The MRAC membership meeting was called to order at 7:06 pm by Dan, N9ASA, club vice-president. The Mic was passed around for introductions. A sign-in sheet was circulated for the recording of membership information and attendance.

Preliminary discussion; Dave DeFebo, WB9BWP gave a short presentation on the CQ September 2011 magazine in which our club's June Field day effort was documented. Two pictures from that shoot were used in the CQ magazine for 15 months 2012/2013. The club field day site with WB9BWP was on the cover of the CQ magazine. The Gateway ARC was represented in the calendar as the February pictorial. They have a female president that is always good for publicity. The MRAC group also has the from cover pictorial of the CQ 2013/2014 calendar. Al, KC9IJJ has the August 2013 pictorial, operating inside the "Disco tent" along with a picture in the April 2013 CQ issue. The back cover of the CQ calendar is Dave, WB9BWP's two cars with the same license plate, which is legal in Wisconsin. This same photo graces the Month of July in the same issue.

Tonight's Program:

Tonight's program is a roundtable discussion on how each member got into the Amateur Radio hobby and what kind of radio they first bought. Starting radio suggestions: TS-2000 to expensive for a new ham but, an HT used from the internet. Charlie, KC9CEQ, recommends learning the regulatory operating procedures on a dual band unit in your home. Antenna can be mounted inside the building. There are a few real old-timers in the club that first had tube radios or built their own.

Membership Meeting Minutes

The club needs advertising to bring in more members. We should have some kind of handout about the club at the testing area. The club does have fliers of general information, so this would be a practical idea. The Milwaukee Amateur radio community does have yahoo groups and a at least one page on Facebook.

Dan N9ASA, Club vice-president called the business meeting to order at 8:16 pm. The membership meeting minutes were accepted as printing in the club HamChatter by a motion brought forth from Darlene, KC9SBN and seconded by Al, KC9IJJ. Joe, N9UX gave the treasurers report for the period June through August 2013. The club has ample reserve funds due to the sale of a club owned radio and beam antenna, along with donations taken in at the SMARC Hamfest this last July in Oak Creek. Joe reports that the club's CD was renewed this last summer. Joe will be paying out some funds very soon to the Church were we hold our meetings and Pioneer Village. The ARRL Spectrum defense fund will be getting $200 as approved by the club board of directors.

The club membership drive will begin in November of this year as always. No questions were asked of Joe in regards to the club's financial situation. Joe is looking for someone to work the FM Simplex contest coming up in February of 2014. Joe's treasurers report was accepted by a motion made by Al, KC9IJJ and seconded by HAL, KA9OZN. Dan reports that the MRAC field day will be held again at Konkel park in Greenfield as it has been for the last couple of years.

There will be no AES SuperFest in 2014 due to the retirement of the organizer. There has been talk of the clubs in the Milwaukee Metro area subsidizing the mostly manufacturing expo. The idea has been forwarded that this event will become a Hamfest not only a manufacturing event. This event will not replace any of the regular club swapfest events that usually occur in the area over a years time.

Future meeting topics: An oscilloscope intro course, How to work and program a particular radio. There will be not meeting in December of 2013 due to the holidays. The November meeting will be moved up a week due to the Thanksgiving holiday.

Pancho is still looking for someone to help out during the club nets on Friday evening. We have a 10 meter and 2 meter net. At 8 and 9 pm respectively.

There will be a food gathering at Denny's with Pancho after the club meeting.

Dave accepted motions to adjourn the meeting at 8:44pm. Motion made by Al, KC9IIJ seconded by Pancho, N9OFA. Meeting adjourned at 8:46 pm. The room was then policed of trash and returned to an acceptable condition as found before the meeting commenced. A parts raffle will start immediately after the meeting.

The ARRL Centennial QSO Party Starts January 1, 2014!

In conjunction with the 100th anniversary of the ARRL, the ARRL Centennial QSO Party is set to kick off January 1 for a year-long operating event in which participants can accumulate points and win awards, as well as working new stations and making new friends. During 2014 W1AW will be on the air from every state (at least twice) and most US territories, and it will be easy to work all states solely by contacting W1AW portable operations. This marks the first ARRL-sponsored operating event where every member is worth at least one point. The event is open to all, although only ARRL members and appointees, elected officials, HQ staff and W1AW are worth points. Working ARRL's president, for example, earns 300 points!

To qualify for points all contacts must be two-way (no cross-band or cross-mode contacts), using CW, phone (FM, SSB, AM, digital voice), digital (any digital mode, such as PSK31, RTTY) on 160, 80, 40, 30, 17, 15, 12, 10, 6, 2 and 1.25 meters, plus 70 centimeters and satellite.

Stations exchange signal report and ARRL abbreviation. Contacts do not have to be contest-style and it isn't necessary to give the ARRL organizational information. A centennial database will assign point values to all logs submitted electronically. Those not submitting electronically, however, will need to obtain the QSO information during the contact. This event is not a contest, so participants may make contacts in any fashion they prefer.

The Centennial QSO Party is scored by totaling the values of all eligible contacts. There are no multipliers or bonus points. Logs submitted via Logbook of the World (LoTW) will be scored automatically.

Centennial Points Challenge

To compete in the Centennial Points Challenge, submit logs via Logbook of the World (LoTW). The system will automatically look for points-qualifying contacts from submitted logs and apply them to each participant's Centennial QSO Points table. QSOs do not have to be matched in LoTW for points to be achieved -- this is an honor-based event. No paper forms or information will be accepted for the Centennial Points Challenge, however. Some points worth noting:

Club call signs do not count for points. Repeater contacts are not valid for credit.

Mobile and portable operations are okay but do not count for points in addition to home operation -- ie, a contact with KØGW counts for KØGW, whether it is made with KØGW/4, KØGW/m, or PJ4/KØGW. Stations outside of the US may also count for points.

Beat the Cold

Healthy people often ignore the first signs and symptoms of a cold-related injury or illness: 'A little cold won't kill me,' they say. They are correct, but the emphasis is on 'little'. On the other hand, children and the elderly may not be aware of the early warning signs. You, as an informed person, should watch for signs and symptoms, such as persistent shivering, from yourself and others.

Having cold hands and feet is bad enough, but add moisture and the feeling of cold can turn to injury. The heat loss increases dramatically if a part of your body is moist or wet and exposed to the air, in particular moving air. Your fingers can become so stiff that simple manual tasks are impossible. Keep feet, hands and exposed skin dry.

Prevent conductive heat loss as much as possible. If you have to sit on cold ground, place some insulating material between your backside and the ground, so you don't lose heat to it, and don't touch anything metal either, as it can reach even lower temperatures and can freeze your skin instantly. Avoid substances that constrict blood vessels, such as nicotine and certain medication. Talk to your doctor if you are cold sensitive.

Be active without overexerting yourself. The combination of cold weather and intense physical activity could be too much for patients with heart or circulatory problems. Just breathing cold air may be sufficient to lower the body temperature below the danger level. Wear a scarf or similar in front of your mouth to pre-warm the cold air. This is particular important for asthma sufferers, as cold dry air is one of the recognized asthma triggers. If all else fails, move indoors for your exercises.

Protect your body from the winter cold

Follow the swallows to warmer regions. The thought isn't too farfetched – many retirees are almost as predictable as swallows in their migratory behavior. Every autumn, caravans and mobile homes clog the major roads leading to the sunnier locales, their passengers searching for warmth to soothe their aching bodies. By the time early summer arrives and the temperatures rise too high, these migratory people return to the cooler regions.

Avoiding the cold is obviously the best prevention, but not always practical. Life has to go on and work has to be done – but safely. The less time you are exposed to the cold the less chance you have of being injured or getting ill. But try to explain this to the kids up bright and early after the first snowfall. They must build that snowman. They must throw snowballs at their friends. They must cover themselves from head to toes in snow. The snow may be slushy but that won't deter them. 'Hey kids, that's enough. You are getting cold,' the concerned parent shouts. 'Oh no. We are warm. Honestly,' comes the stuttered reply from shivering pair of blue lips. Awareness is just as important as avoidance. Know the cold injury symptoms and first aid treatments. Be aware of the weather forecast and wind chill. Be prepared.

Introduction

Instead of wearing a super-thick ski jacket above your shirt, you should consider wearing multiple layers of loose-fitting clothing. This way, you can remove or add layers if you feel too hot or cold.

The trapped air between each layer and in the padding of a garment acts as perfect insulation. Dirt or sweat, however, clogs the space between the padding fibers and leaves less room for the insulating air. On the other hand, a loosely knitted jumper allows the wind to penetrate deep into the clothing and carry away the warm layer of air. The outer layer should preferably be waterproof and windproof. But this is a trade-off between the need for protection against the environment and the need for ventilation. A waterproof outer layer acts like a sauna suit because your sweat can't evaporate, and accumulates in the clothing. Any initial feeling of warmth soon gives way to cold. Such a garment works best while outdoors when you stand or sit and you don't sweat much, but is useless when you work or exercise hard. Tightly knit fabrics or modern microfibers that repel or resist rainwater but allow 'breathing' are a compromise.

You lose a large amount of heat if your head is exposed to the cold. More than half of total heat loss can occur from the head. Unless you are too hot and need to radiate heat, wear a hat, cap or hood, preferably with ear protection. A scarf, facemask or balaclava protects the skin on your face. Just take it off, though, when you enter a bank!
Mittens provide a larger volume of insulating air for your fingers. Gloves, however, win the contest when you have to perform an awkward task, such as opening a zipper in a hurry.

Clean, dry and thick socks warm your feet; a rubber sole on your shoes protect from moisture; and a permeable material for the upper part of the shoe provides ventilation. Your feet will thank you with the loveliest fragrance they ever produced. Rubber boots, however, prevent ventilation. If worn too long, trench foot or immersion foot develops. Tight shoes restrict blood circulation and add to the risk of cold injury.

Cold Weather Clothes

The ideal winter clothing:

- absorbs sweat
- deflects the wind
- is lightweight
- is waterproof
- is warm
- is durable
- insulates
- ventilates
- is easy to wear and remove

Prepare your house for the winter by installing or improving insulation. Don't forget to cover exposed water pipes if you expect temperatures below freezing. Keep steps and walkways free of ice to prevent slipping.

Weather Hazard Awareness

Have your heating checked before the cold season starts, as partly blocked exhausts can lead to carbon monoxide poisoning. Is the heater adequate for the size of your home? Many governments of countries in cold climates provide financial support for their low-income citizens to either insulate their homes or to supplement energy costs.

Remember that even relatively mild temperatures can cause hypothermia if a person is exposed to the elements for some time. An easy-to-read thermometer for the bedroom of your elderly relative could be a life-saving birthday present. Institutions such as old people's homes or homes for the mentally disadvantaged have to be especially prepared, as their patients' responses to the cold may be ineffective.

Prepare your home for the winter cold
Someone has to brave the bitter cold and fix those broken power lines, so others can earn their income in the comfort of heated office buildings. Someone has to work the oil rigs in gales and storms so that others can drive their cars to work. If appalling weather isn't bad enough, cumbersome cold-weather clothing and slippery surfaces add further to the strain of outdoor work.

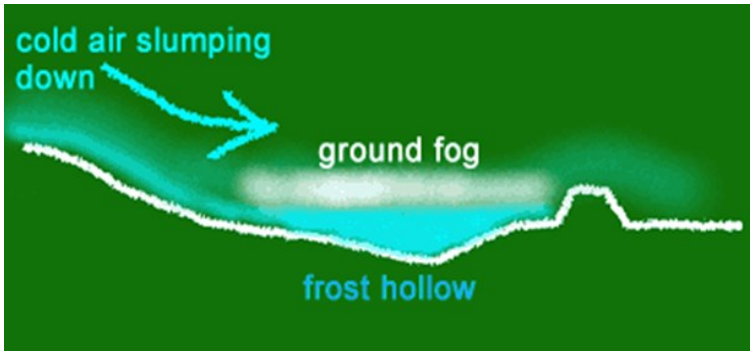
Under such conditions, how can workers keep up their morale? Perhaps, they visualize a hot Irish stew. Workers need high-energy food. Their caloric requirement in the cold is up to 50% higher than it is under warm conditions.
Workers should be trained to perform tasks while wearing cold-weather clothing, as it's not only cumbersome, but sometimes hazardous. Hats and hoods restrict peripheral vision, thus compromising safety. Glasses and goggles frequently fog over, reducing visibility; while the loose end of a scarf or belt can get caught in machinery and cause injury. Conventional switches and buttons are difficult to operate with gloves or mittens, so the employer should ensure that the workplace or machinery is designed for cold weather operations.

The properties of substances change with temperature: flexible material can become hard and brittle, and even the metal teeth on zippers can freeze or break in extreme conditions. The good intention of taking cold metal tools to a warm environment will make the air's water vapor condense and may cause corrosion in the possibly very expensive object.

Frost Hollow

Frost hollow (or frost pocket) is the name for low-lying area (e.g. a valley bottom or a smaller hollow) where frosts occurs more frequently than in the surrounding area. This is normally as after a dry, clear and cold night cold air drains down neighboring slopes into a localized pocket from which it is slow (or unable) to escape. Frost hollows of larger scale (a valley or basin) are also known as **cold pools**. Cold pools are areas where cold air is trapped under an inversion under calm winter weather conditions.

Frost hollows are widespread along the Welsh borders or Scottish glens. A frost pocket may also occur behind a wall or hedge. In the case of the famous Rickmansworth (Herts.) frost pocket, a railway embankment prevents the natural drainage of cold air from the valley. **Minimum temperatures** in the pocket may be tens of degrees below the surroundings. For this reason, fruit growers try to avoid frost pockets.



Often one can actually see a frost-pocket. The accumulating layer of cold air is defined by the local topography and can be everything from a couple of inches to hundreds of feet thick. Therefore you might see a frost hollow filled with a shallow "lake" of ground fog or a cold pool in the Highlands, topped with a thick layer of **stratus cloud** marking the boundary of an **inversion**.

OUR SINCERE APPRECIATION…..

Rusty Kapela

After 36 years with the National Weather Service, including 19 years at the Milwaukee-Sullivan National Weather Service office, warning coordination meteorologist Rusty Kapela retired. Rusty has been a long time and strong supporter (including financially) of Milwaukee Area Skywarn, is the person we reported to, and was instrumental to our growth and success. As a Warning Coordination Meteorologist (WCM) his job included storm damage surveys and write-ups, statistical data, working with emergency managers and the media, volunteer groups, and overseeing the weather spotter training program.

Since Rusty has played a part in so many of our lives, we felt as a sign of appreciation, for all of his contributions over the years, to present him with a special retirement gift. Milwaukee Skywarn V-P Rick Swierczynski came up with the gift idea, made the first donation, and then asked Facebook members and friends to also contribute.

Donations ranged from 5 to 25 dollars and the name of each donor was included with the accompanying gift card. The final total was a whopping $320. Way beyond our expectations. At Rusty's October 6th retirement party Milwaukee Skywarn President Skip Voros spoke and delivered the gift package. A short YouTube video of the presentation is at: **http://www.youtube.com/user/milwaukeeskywarn/videos?view=pl** The same 7 minute video clip is also at: **http://youtu.be/xVYqN1BkN3Q**

The Experimenters Bench

Making Baluns

I'm sure many of you have heard of the balun, but how many people have had ago at making one? Sure you can buy them from most radio emporiums, but once you learn how to make them yourself you will save around 80% of the cost.

If you do not understand when and where a balun should be used, then check out the many antenna books and the Internet. I tend to use baluns in all my dipoles to stop current on the outer sheath of the coax - this could lead to RF getting in to the shack, TVI problems etc.

There are two types of balun: a voltage type and a current type I have not found a use as yet for a voltage type so I stick to the current type balun. Most amateurs know that impedances higher or lower than 50 ohms at the antenna port of a rig can spell disaster for its PA on transmit. Why radios with built in ATU's do not have a balanced input in today's fast moving electronics industry is beyond me.

So how do you construct a current type balun? The first thing to consider is the power you wish to push through the balun - this will dictate the type of ferrite core you use and the size of the winding conductor.

Below is a list of the types of ferrite cores and the maximum power that can be safety used with them. Personally I would use a safety margin of about two thirds of the maximum rating, as to avoid heating of the ferrite core. All the cores listed below should be red in colour.

Basically the colour refers to the make up of the core, which I will not go into detail here, and the listed cores are suitable for 1 MHz to 30MHz only.

Core type Power

T-80-2 60 watt

T-106-2 100 watts

T-130-2 150 watts

T-157-2 250 watts

T-200-2 400 watts

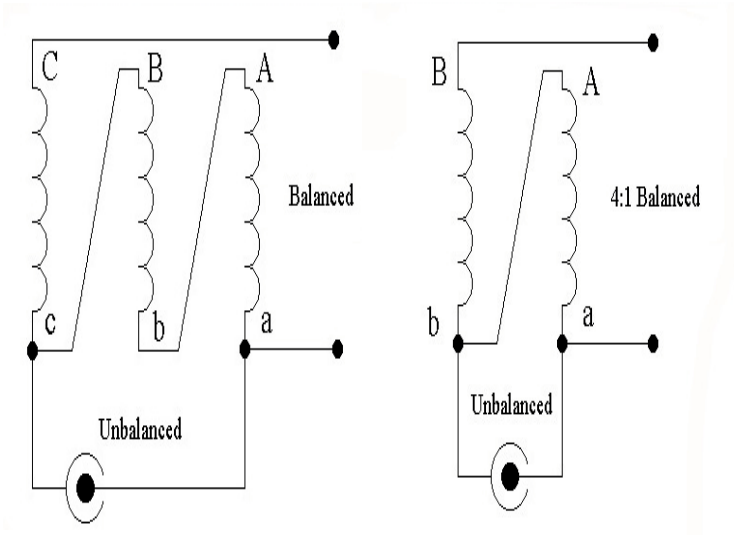
T-200A-2 400 watts

T400-2 1000watts

The Experimenters Bench

Once you have chosen the core, the next thing to consider is the size of the windings. I personally prefer enameled copper wire for this, as it's easily obtained from places like Maplin.

For 1:1 baluns on a T-130-2 core I use 0.90mm (20swg). For a 4:1 on the same core I use 1.25mm(18swg), because you have one fewer winding on the core, as can be seen from the electrical drawings below. I should mention here the higher the number of the core the larger its diameter will be, that gives you more room for larger diameter windings.



Electrical drawings for a 1:1 balun (left) 4:1balun (right)

The next very important step is of course how many windings are required to make the balun. To help you here I have made a list of all which have worked well for me in the past. You can of course optimize the windings if you have a need to by adding or subtracting a winding accordingly.

Core type Number of turns

T-80-2 25

T-106-2 16

T-130-2 18

T-157-2 16

T-200-2 17

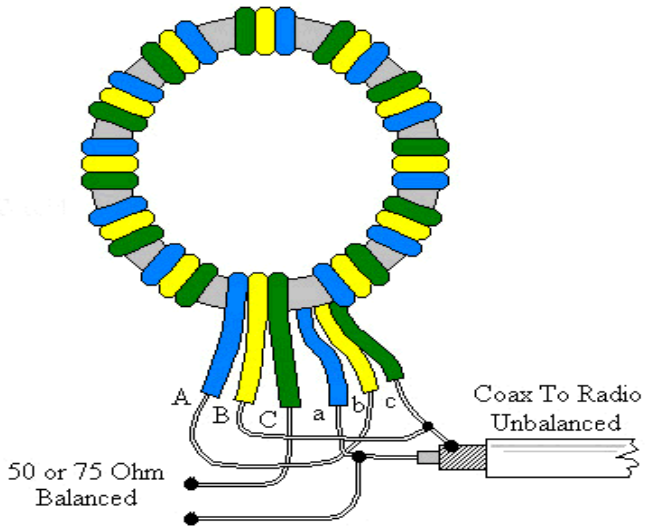
T-200A-2 13

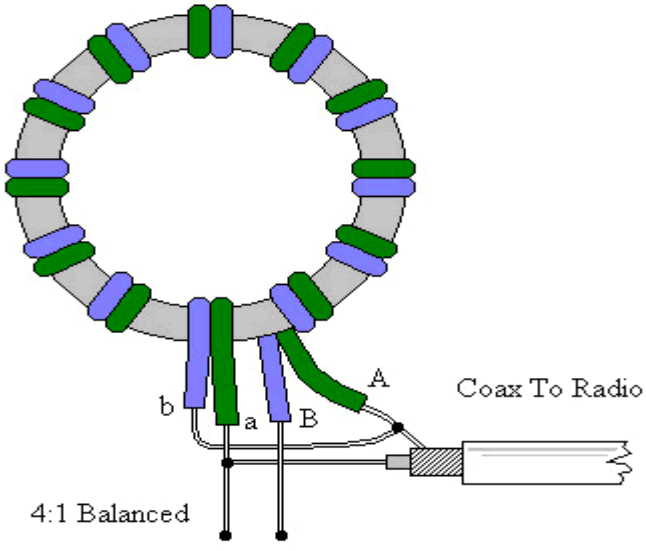
T400-2 14

As can be seen from the electrical drawings above a 4:1 balun only has two windings wound onto the core together side by side. This is called 'bifilar', and the 1:1 has three windings together which is called 'trifilar' wound.

It makes no difference if you are making a 1:1 or 4:1 balun - the number of turns are the same, but you'll obviously need more space for trifilar winding. For a 1:1 balun start by cutting three equal lengths of your winding conductor and mark the ends A-a B-b C-c. This will avoid any confusion when it comes to soldering the connections once the balun has been wound. It's always better to cut the winding conductors too long as it's easy to trim off waste but impossible to add to the length! 1.2 meters each for a T130-2 should be about right. You can attach the start of the winding to the core by using a small cable tie to keep it in place – you need to keep a firm tension on the wire as you're threading through to keep nice tight windings.

Simply wind all three conductors together around the core, keeping them tight and evenly spaced (see below picture). The windings must not cross over.





Finally it's time to connect the balun up! It's far easier to look at the above pictures rather than try and verbally explain. Check all your pairs with an Ohm meter before connecting/ soldering. If you've got one with a buzzer that'll make life easier. The balun will need some form of housing, and I have used plastic boxes, tubes etc, but if you are worried about stray RF then a metal enclosure could be used, or simply line a plastic box with metallic tape or tin foil.

There are many myths surrounding baluns: some people swear by them, others just swear at them! High SWR will only be caused by the balun if you've wound it incorrectly or burnt it out by overpowering it; they also do not generate harmonics! A 1:1 balun at the center of a balanced dipole can only de-couple the current from the outer sheath of the coax and it's impossible for it to change the impedance of the antenna giving a high SWR. That's the theory anyway.

I'm fully in favor of baluns and their usage. Some other interesting things I have found – the bandwidth of your antenna increases, prior to installing a balun into my loaded 80m dipole my bandwidth was around 100 khz, after installing a balun the bandwidth increased by around 50% again to 150khz with no effect on SWR. Another important use of baluns is that some TVI problems tend to disappear.

Early Radio: Military Communications

SFC James K. F. Dung

Behind 'Friendly' Lines

05 June 2006

John A. Larsen

In August 1967, I returned to Vietnam for my second tour. I had already served a six-month TDY trip from the 1st SF Group on Okinawa, assigned to the 400th Army Security Agency Special Operations Detachment (Airborne). Our job had been to provide communications intelligence to 1st SFG.

This time I was assigned to the 400th's sister unit, the 403rd Radio Research Special Operations Detachment. It was hoped that the change in designation from "Army Security" would confuse the North Vietnamese intelligence types, who would be unable to determine the unit's true function.

During my first tour in 1965, we had an intercept site in Tay Ninh at Trang Sup (A-301) Special Forces camp. It was there that I first became acquainted with the problem that every American unit working the Vietnamese experienced – enemy agents. Trang Sup had two A Teams – one operational, another that trained Civilian Irregular Defense Group (CIDG) soldiers for the camps in Tay Ninh. All in all, there were nearly 1,000 troops in camp. It was believed that as many as 5-10% were VC or VC sympathizers. The team house had been heavily sandbagged and was well stocked with weapons and ammo in case it had to become another American "Alamo"

Regardless, you always knew that it took a single enemy agent to toss a grenade into your room. In those early days of the war, most operations involved walking out of the camp early in the morning and getting into the wood line before the VC observers on Nui Ba Den (Black Virgin Mountain) spotted you. Of course, no one ever admitted they knew who fired the red star cluster right after your patrol departed the camp. Nobody ever spotted the guy.

While we were there, one of your intercept operators was walking by the Luc Luong Dac Biet (LLDB – South Vietnamese Special Forces) radio room and stopped to listen to their operator sending Continuous Wave (Morse code). A few minutes later, he shut down. As our man was leaving, he heard the operator come back up using VC radio procedure.

Our operator immediately ran back to the intercept site and was able to verify that the LLDB operator was indeed a VC agent.

I slept in the dispensary when I was in camp. As an added safe-guard, I always managed to sneak some extra food to the camp mascot, a dog I called "Old Yeller." His claim to fame was that he hated Vietnamese – of any dialect or political persuasion. This was a little unusual. On my first tour at a border ranger camp, the Vietnamese dogs barked at me for about two weeks, until they finally accepted me as a resident. They always barked continually at any visiting Americans. One night I woke up to hear Old Yeller quietly growing. I grabbed my M-14 and looked down the hallway. About six feet back from the door a CIDG soldier with a red filtered flashlight stood, sending what appeared to be Morse code towards Nui Ba Den. He was so intent on what he was doing that he didn't notice my presence until I stuck the muzzle of my rifle behind his right ear and walked him to the team house.

Other things happened. We would often find the feed cover on the .50 cal. machine gun ajar, and on closer inspection

would discover that someone had dropped a handful of dirt in the feed tray. Sometimes we would find rags stuffed down the barrel of the 81mm mortars. Yet it was on my second tour that I personally witnessed the real clincher.

I arrived in Pleiku in August 1967 after spending 10 months in the hospital with tuberculosis picked upon my first tour, six months more at Ft. Meade attending a school run by the National Security Agency, and then Ranger School. I was ready and eager to get back to work again.

For the first time 45 days, I worked out of Engineer Hill and lived at the C Team compound of Bravo Company, 5th SFG. Things hadn't changed much in the two years since I had left Nam. The camp barber was discovered carrying blasting caps. A further search revealed that his plywood barber chair was hollow and was crammed with C-4 plastique explosives. The barber shop was located just behind the commander's – LTC Faistenhammer – office.

If I may digress, LTC Faistenhammer was an interesting man. A native German, he left Bavaria for the US around 1936. He returned in 1944 as a tanker with the 4th Armored Division. At the conclusion of the Korean War, he was serving as an artillery officer. After a tour with Operation White Star in Laos, and several trips to Vietnam, this dedicated officer would spend a major portion of his career under combat conditions, and 17 years later I would round out my own career by serving as a sergeant major of Company A, 3rd Battalion, 10th SFG under the command of his son, Major William L. Faistenhammer. They were both excellent officers.

In another incident, someone operating a forklift at the ammo dump noticed a wire running into a pallet of 105mm shells. Sure enough, an investigation turned up a satchel charge set to blow on command. One night we had an alert, and one of the sergeants had a harrowing experience. The NCO kept his web gear hanging from a mail in his room. When the alert sounded he back into his LBE and began to slip it on. He noticed a slight resistance as he pulled it onto his shoulders. Looking back he spotted a thin wire hooked to one of the M26 grenades hanging from his web gear. Luckily, the safety pin had been bent just a little too much to pull out as he donned his equipment. While I was at the C Team compound, I kept my gear locked in a wall locker until I was ready to go to bed at night and all the local Vietnamese were out of the camp.

Shortly before the Vietnamese national elections in 1967, I was sent out to Camp Buon Blech (A-238) with a couple of intercept operators. Buon Blech was located on a mountain that overlooked the surrounding area. I liked it because the VC / NVA would have to attack uphill rather than across open flat ground like at the lowland camps. The three of us were to determine if being nearer to the Cambodian border would enable us to intercept more transmissions and provide more timely intelligence to the camp by being on site. Most of what we picked up was not duplicated by any other source, so the assignment paid off. However, as an analyst I didn't have a lot to do. Any well-trained analyst could handle a much larger amount of intercepts than a single pair of operators could produce. In addition, because of their security classifications, I was unable to bring along the required working aids to process the intercepts.

As the elections drew closer, the intelligence sergeant (who I remember as SFC Jerry Clark) received reports that the VC were going to attack Buon Blech to demonstrate the weakness of the South Vietnamese government. Several nights later, we were heavily mortared, but the VC were firing into a strong headwind. Their fire proved to be ineffective, but our counter-battery fire, firing with the wind, chewed them up pretty bad. We had a little trouble with the increment settings swelling with moisture and causing some of the rounds to hang up in the 81mm tubes.

The day after the failed VC attack, I asked the Intelligence sergeant about a partially finished bunker located just below the team house. He explained that it was being built to house a pair of .50 cal. machine guns, but the camp was too short-handed to finish it. I told him I had instructed on the .50 cal. during my first tour and volunteered to finish the job. He assigned me a squad to finish the bunker and set up the machine guns. Putting most of the squad to work stacking sandbags, I took the rest of the men to the supply building to pick up the two .50s. We found them still packed in cosmoline, so I signed out for about a 10' square of white canvas, a can of gas, some cleaning rags and a bamboo pole. Dividing the canvas in half, I stripped the two machine guns and had my detail clean off all the cosmoline from the parts. While they were busy with this task, I took a ¾ ton truck to the ammo bunker, located some wooden crated of .50 cal. ammunition, and loaded about 2,000 rounds of what turned out to linked all-linked aircraft ammo.

When I discovered my mistake, I had to return to the ammo bunker, unload the crates, and pick up a couple of thousand rounds of ball ammo. At 30lbs. Per 100 rd. can, I was pretty tired after finishing the exchange.

When I got back and checked on my weapon cleaning detail, I discovered all the parts were clean, but I was missing one bolt stud. I figured one of the Montanyard CIDG soldiers had simply lost it. With one gun down, I quickly reassembled the other, set the head spacing, and took it out to the nearby range to fire up some old 55-gallon drums. It was just like shooting tin cans with a .22, except it was a little more impressive. I walked those drums back over the 6' high earthen berm like they were nothing.

When I finished, I took the .50 back to the bunker, set it on the tripod, ran some patches through the barrel, and went to dinner. I joked with one of the Montanyard assistant cooks, who was only 13, that I could use an assistant gunner. As I would find out later that night, he took me seriously.

Early Radio: Military Communications

Buon Blech was a pretty squared away camp and possessed a better than average security system. Each night the camp would put out several five man ambushes along approach routes to the camp's perimeter. The SOP was for each ambush team to put out a Claymore mine. Each soldier carried an M2 Carbine. If the enemy showed up, the team was to fire the Claymore, empty a 30 round magazine on full automatic, then fall back toward the camp. What we heard later that night was one of these ambushes being blown north of the camp near the airfield. The camp began firing illumination rounds from its 81mm mortars over the area of the contact. The flares drifted over the airfield and disappeared below the trees on the far side. The floating flares formed shadows across the airfield. The camp commander ordered that no one fire until he gave the word, and he specifically ordered me to avoid loading the .50 cal. until he OK'd it.

A short time later, I reported to him over the radio that I could see people coming across the airfield. He asked me if I was sure. I replied that I was, since they had just set of a trip flare. I didn't tell him that it was our five man ambush teams coming in. He authorized me to load the machine gun and stand by. I grabbed retracting slide handle on the right side of the receiver, began the first of two pulls that were required to chamber a round in one of John Browning's .50 cal. machine guns, and was shocked to find that the retracting slide handle had come off in my hand.

With a useless machine gun, I knew I wouldn't be able to stop a VC assault. When the next flare burned out, I took advantage of the cover of darkness, jumped up on the lip of the bunker, grabbed the gun off its tripod, and brought it back inside. To make matters worse, I knocked my M-16 into the dirt wall, jamming mud into the flash suppressor and possibly down the barrel. Now I was really upset. With an impending enemy attack, I was without a functioning weapon. Desperate, I banged the flash suppressor on the cement floor of the bunker, stuck the rifle over the lip of the bunker, closed my eyes and squeezed the trigger. At least I had one weapon that still worked.
I shined a flashlight beam along the right side of the .50 cal's receiver to where there should have been a retracting slide handle held by a pin. The only thing I saw was the threaded portion of the lug. Because of the previous problems with the 81mm mortar rounds hanging up, I had gotten in the habit of carrying several 81mm mortar safety pins in my pocket so I could quickly reinsert them into the hung rounds. I put the retracting slide handle back on the lug and pushed the one of the mortar safety pins through the hole the cotter pin went through. While this served to keep the handle in place, it was still too loose to operate. Suddenly, the 13 year old cock's assistant from the mess hall showed up to be my assistant gunner. He had taken me seriously. I had him push against the left side of the receiver as I pushed at a 45-degree angle against the right side, and between us I was able to cock the weapon. It wasn't easy, but could be done.

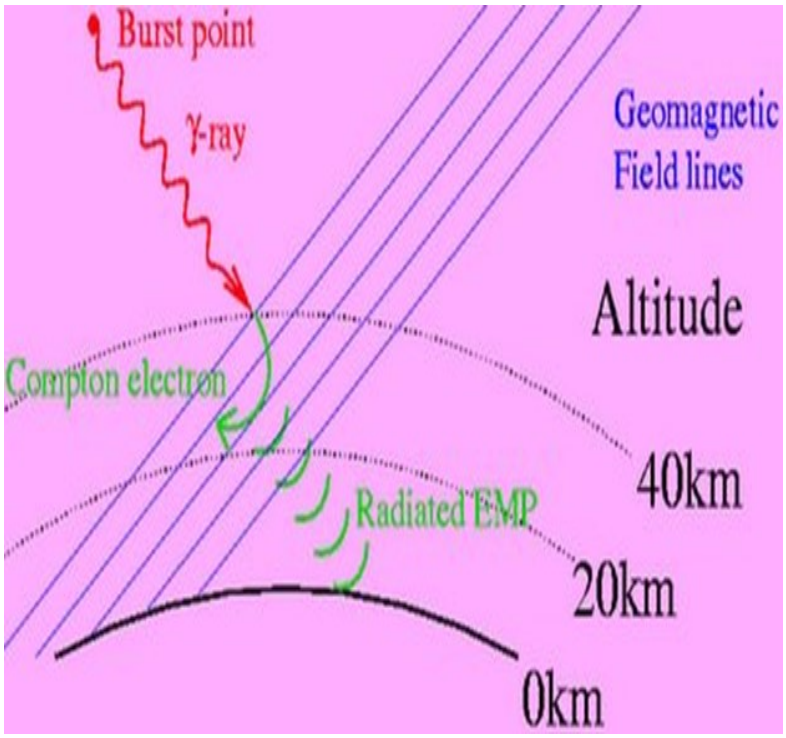
We put the machine gun back on the tripod and prepared to ruin someone's night. We had heard carbine fire and several more Claymores going off when we were working on the machine gun. Now that we were back in business, everything was quiet again. As it got closer to daylight, we realized that it was over. Normal VC SOP was to attack at night and pull out before daylight, when US air power arrived. I was pissed that I had not fired a single round.

We learned a little later that the VC force had bumped into several of our five man ambushes as it had approached the camp. The enemy commander, his executive officer and the unit's political officer were among those killed and wounded. As the last of the Claymores detonated, the leaderless VC decided the Gods were not with them on that night and withdrew from the area.

As dawn finally appeared, we stood down and went to the mess hall for some coffee. When I returned to the bunker a little later and looked around, I located the cotter pin, lying in a little strip of mud where the concrete floor ended short of the wall. You could see where someone had attempted to stomp the pieces into the mud by stepping on them. Undoubtedly, this was the same individual who has 'lost' the other .50's bolt stud.

If you ever find yourself working in a foreign country with locals and your .50 cal. is critical to your base camp defense, I would advise you to bend back that cotter pin and check it several times daily just in case one of your 'allies' isn't exactly what he's supposed to be.

High Altitude Electromagnetic Pulse



Name of Net, Frequency, Local Time	Net Manager
Badger Weather Net (BWN) 3984 kHz, 0500	W9IXG
Badger Emergency Net (BEN) 3985 kHz, 1200	NX9K
Wisconsin Side Band Net (WSBN) 3985 or 3982.5 kHz, 1700	KB9KEG
Wisconsin Novice Net (WNN) 3555 kHz, 1800	KB9ROB
Wisconsin Slow Speed Net (WSSN) 3555 kHz, Sn, T, Th, F, 1830	N1KSN
Wisconsin Intrastate Net - Early (WIN-E) 3555 kHz, 1900	WB9ICH
Wisconsin Intrastate Net - Late (WIN-L) 3555 kHz, 2200	W9RTP
ARES/RACES Net 3967.0 kHz, 0800 Sunday	WB9WKO
* Net Control Operator needed. Contact Net Manager for information.	

Next Regular Meeting

The next meeting will be on Thursday, October 31st at 7:00PM. We meet in the Fellowship Hall of Redemption Lutheran Church, 4057 N Mayfair Road. Use the south entrance. Access the MRAC Yahoo group for important details about the February Meeting.

Meeting Schedule:

November 21st, 7 pm

Please do not call the church for information!

Club Nets

Please check in to our nets on Friday evenings.

Our ten meter SSB net is at **8:00 p.m.** at **28.490 MHz USB** Our two meter FM net follows at **9:00 p.m**. on our repeater at **145.390 MHz** with a minus offset and a **PL of 127.3 Hz**.

Visit our website at: **www.w9rh.org**

Or phone (414)-459-9741

Chatter Deadline

The **DEADLINE** for items to be published in the **Chatter** is the **15th of each month**. If you have anything (announcements, stories, articles, photos, projects) for the 'Chatter, please get it to me before then.

You may contact me or Submit articles and materials by e-mail at: **Kc9cmt@earthlink.net**

or by Post to:

Michael B. Harris

807 Nicholson RD

South Milwaukee, WI 53172-1447

VE Testing:

October 26th,2013
November 30th, 2013
January 25, 2014
Location: Amateur Electronic Supply Time: 9:30 AM (Walk-ins allowed)
ALL testing takes place at: Amateur Electronic Supply 5720 W. Good Hope Rd. Milwaukee, WI 53223

Area Swapfests

November 2nd, Milwaukee Repeater Club's 2013 Swapfest Location: Milwaukee, WI Sponsor: Milwaukee Repeater Club Website: http://www.mrc91.org

November 3rd, FCARC Swapfest Location: Appleton, WI Sponsor: Fox Cities Amateur Radio Club Website: http://www.fcarc.us/hamfest.php

Jan. 4th, 2014 WARAC's 42nd Annual Midwinter Swapfest Location: Waukesha, WI Sponsor: West Allis Radio Amateur Club Website: http://www.warac.org

MRAC Working Committees
100th Anniversary:

- Dave—KA9WXN
- Dan—N9ASA

Net Committee:

- Open

Field Day

Dave—KA9WXN, Al—KC9IJJ

FM Simplex Contest

- Joe – N9UX
- Jeff – K9VS

Ticket drum and drawing

- Tom – N9UFJ

Newsletter Editor

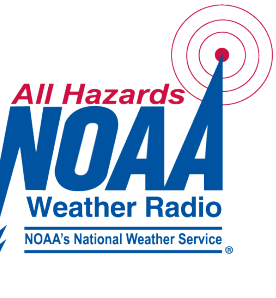
- Michael-KC9CMT

Webmaster

- Mark Tellier—AB9CD

Refreshments

- Hal—KB9OZN



Membership Information

The Hamateur Chatter is the newsletter of MRAC (Milwaukee Radio Amateurs' Club), a not for profit organization for the advancement of amateur radio and the maintenance of fraternalism and a high standard of conduct. MRAC Membership dues are $17.00 per year and run on a calendar year starting January 1st. MRAC general membership meetings are normally held at 7:00PM the last Thursday of the month except for November when Thanksgiving falls on the last Thursday when the meeting moves forward 1 week to the 3rd Thursday and December, when the Christmas dinner takes the place of a regular meeting. Club Contact Information

Our website address **http://www.w9rh.org**

Telephone **(414)-459-9741**

Address correspondence to:

MRAC, PO Box 26233, Milwaukee, WI 53226-0233

Email may be sent to: **w9rh@arrl.net .** Our YAHOO newsgroup:

http://groups.yahoo.com/group/MRAC-W9RH/

CLUB NETS:

- The Six Meter SSB net is Thursday at 8:00PM on 50.160 MHz USB
- Our Ten Meter SSB net is Friday at 8:00PM on 28.490 MHz ± 5 KHz USB.
- Our Two Meter FM net follows the Ten meter net at 9:00PM on our repeater at 145.390MHz - offset (PL 127.3)

The MRAC HamChatter is a monthly publication of the Milwaukee Radio Amateurs' Club. Serving Amateur Radio in Southeastern Wisconsin & all of Milwaukee County
Club Call sign – W9RH
MRAC Website: http://www.W9RH.org
Editor: Michael B. Harris, Kc9cmt, kc9cmt@Earthlink.net

Milwaukee Area Nets

Mon.8:00 PM 3.994 Tech Net

Mon.8:00 PM 146.865- ARRL Newsline

Mon.8:00 PM 146.445 Emergency Net

Mon.8:00 PM 146.865- Walworth County ARES net

Mon.8:45 PM 147.165- ARRL Audio News

Mon. 8:00 PM 442.100+ Railroad net, also on EchoLink

Mon. 8:00 PM 442.975+ WARC W9CQ net also on EchoLink 576754

Mon. 9:15 PM 444.125+ Waukesha ARES Net on the 1st, 3rd, and 5th Monday of each month.

Mon. 9:00 PM 147.165– Milwaukee County ARES Net

Tue.9:00 AM 50.160 6 . Mtr 2nd Shifter's Net

Tues. 8:00 PM 145.390– General Class

Tue. 9:00 PM 145.130 MAARS Hand Shakers Net

Tue. 8:00 PM 7.035 A.F.A.R. (CW)

Wed. 8:00 PM 145.130 MAARS Amateur Radio Newsline

Wed. 8:00 PM 147.045+ West Allis ARC net

Wed. 8:00 PM 147.270+ Racine County ARES net

Wed. 9:00 PM MAARS SwapNet, AllStar link to FM-38

Thur. 8:00 PM 145.130– General Class

Thur. 8:00 PM 50.160, 6 Mtr SSB Net

Thur. 9:00 PM 146.910 Computer Net

Fri. 8:00 PM 28.490 MRAC W9RH 10 Mtr Net SSB

Fri. 9:00 PM 145.390 W9RH 2 Mtr. FM Net

Sat. 9:00 PM 146.910 Saturday Night Fun Net

Sun 8:30 AM 3.985 QCWA (Chapter 55) SSB net

Sun 9:00 AM 145.565 X-Country Simplex Group

Sun 8:00 PM 146.91 Information Net

Sun 8:00 PM 28.365 10/10 International Net (SSB)

Sun 9:00 PM 146.910 Swap Net

First Thursday of the month 8:00 PM 442.200+ Round Table Tech Net

2meter repeaters are offset by 600KHz - - 70 centimeter repeaters are offset by 5 MHz

Wind Chill Chart

Wind (mph) \ Temperature (°F)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01